

REMARKS

This Amendment is submitted in reply to the Third Office Action dated April 13, 2005. Applicants respectfully request reconsideration and further examination of the patent application under 37 C.F.R. § 1.111.

Upon entry of the foregoing Amendment, Claims 41-44 are pending in the application. The amendments are not believed to introduce new matter, and their entry is respectfully requested.

Based on the above amendment and the following remarks, Applicants respectfully request that the Examiner reconsider and withdraw all outstanding rejections.

Summary of the Examiner's Rejections

Claims 41-44 were rejected under 35 U.S.C. 112 (second paragraph) as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Claims 41, 43 and 44 were rejected under 35 U.S.C. 103(a) as being unpatentable over Zare (US 6,875,348 B2) in view of Hay (EP 0327687 A2).

Claim 42 was rejected under 35 U.S.C. 103(a) as being unpatentable over Zare (US 6,875,348 B2) in view of Hay (EP 0327687 A2) and further in view of MacDonell and Anazawa (U.S. 5,938,908).

Summary of Amendment

Applicants have amended Claims 41-42 and 44 to more particularly define the present invention.

Remarks regarding §112 (second paragraph) rejection

Claims 41-44 were rejected under 35 U.S.C. 112 (second paragraph) as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Applicants have amended independent Claim 41 to correct the antecedent error therein. Accordingly, Applicants respectfully request removal of this rejection.

Remarks regarding §103(a) rejection

Applicants respectfully submit that the combination of Zare and Hay fail to teach the present invention as recited in amended independent Claim 41. The amended independent Claim 41 is as follows:

41. A method for analyzing a biological sample, said method comprising the steps of:

placing a silica sol gel monolith that has a plurality of pores formed therein which have an average diameter in the range of 30-400 angstroms into an electrophoresis apparatus;

pouring a buffer into the electrophoresis apparatus to immerse the silica sol gel monolith;

inserting the biological sample into the silica sol gel monolith; and

applying power to the silica sol gel monolith such that molecules of the biological sample migrate within at least a portion of the plurality of pores formed within the silica sol gel monolith (emphasis on the distinguishing limitations).

The Examiner indicated in the Third Office Action that Zare did not mention a sol gel monolith that has pores with an average diameter in the range of 30-400 angstroms (see page 5, line 1 in Third Office Action). To address this defect in Zare, the Examiner cited Hay which discloses an ultrafiltration membrane that has pore sizes in the range of 10-80nm (100-800 angstroms) and is made entirely out of alpha alumina by seeding boehmite sols with appropriate seeds (see abstract in Hay). The Examiner then combined Zare and Hay to reject the non-amended independent Claim 41. In response to this rejection, the Applicants have amended independent Claim 41 to recite a step where a silica sol gel monolith is used instead of a sol gel monolith (support for amendment can be found on page 15, lines 15-20 and page 17, line 14-21 of the patent application). Applicants respectfully submit that by limiting the sol gel monolith to a silica sol gel monolith this overcomes the §103(a) rejection based on the combination of Zare and Hay. Because, Hay specifically teaches away from the use of a silica sol gel monolith. In particular, Hay states "[t]he presence of minor amounts of common impurities such as silica, magnesia, or titania in predominately alumina seeds does not appear to do any significant harm, so long as these materials are not present in sufficient amount[s] to reduce significantly the chemical resistance of the polycrystalline alpha alumina ESL formed in the process according to this invention (emphasis added) (see page 3, lines 18-21 in Hay)". As can be seen, Hay considers silica as being an impurity in it's ultrafiltration membrane whereas in the present invention silica is a main component of the silica sol gel monolith. MacDonell and Anazawa do not cure this defect. Accordingly, Applicants respectfully submit that Zare, Hay, MacDonell and/or Anazawa do not disclose, teach or suggest the use of a silica sol gel monolith that has a plurality of pores formed therein which have an average diameter in the range of 30-400 angstroms as recited in the amended independent Claim 41.

In the event, the Examiner does not consider the amended independent Claim 41 patentable in view of the foregoing remarks, then the Applicants respectfully request that the Examiner provides support for any subsequent rejection that is based on Zare by submitting and citing the relevant parts of Zare's priority documents. Applicants request this because the filing date on Zare is April 16, 2002 and the filing date of the present patent application is March 4, 2002. As can be seen, the present patent application was filed before Zare which happens to be a continuation-in-part of the following priority documents--U.S. Patent Application Nos. 10/008,482, 09/507,707 and 09/929,275.

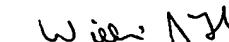
Referring now to dependent Claim 44, Applicants respectfully submit that Zare, Hay, MacDonell and/or Anazawa do not teach or suggest the claimed limitation where the silica sol gel monolith is made by using an acid catalyzed hydrolysis process in which tetramethyl orthosilicate was mixed with HF and HNO₃ in a water bath (emphasis added). Instead, Zare teaches the use of a photopolymerized sol gel which can be made from a metal organic, or metalorganic, photopolymer (see col. 5, lines 45-46 and col. 6, lines 41-51 in Zare). And, Hay teaches away from the making of a silica sol gel monolith (see page 3, lines 18-21 in Hay). MacDonell and Anazawa do not cure this defect. Accordingly, Applicants respectfully submit that Zare, Hay, MacDonell and/or Anazawa do not disclose, teach or suggest the limitations recited in the amended dependent Claim 44.

Conclusion

Applicants respectfully submit that all of the stated grounds of rejections have been properly traversed, accommodated, or rendered moot. Accordingly, Applicants respectfully request reconsideration of all outstanding rejections and allowance of pending Claims 41-44.

It is believed no fee is due for this paper. If this is incorrect, the Commissioner is authorized to charge any fees which may be required for this paper to Deposit Account No. 50-1481.

Respectfully submitted,



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